ER301 Manual

1. Overview

The ER301 RFID Reader is a PC-linked contactless smart card reader/writer developed based on the 13.56 MHz Contactless (RFID) Technology. It supports Mifare® and ISO 14443A cards.

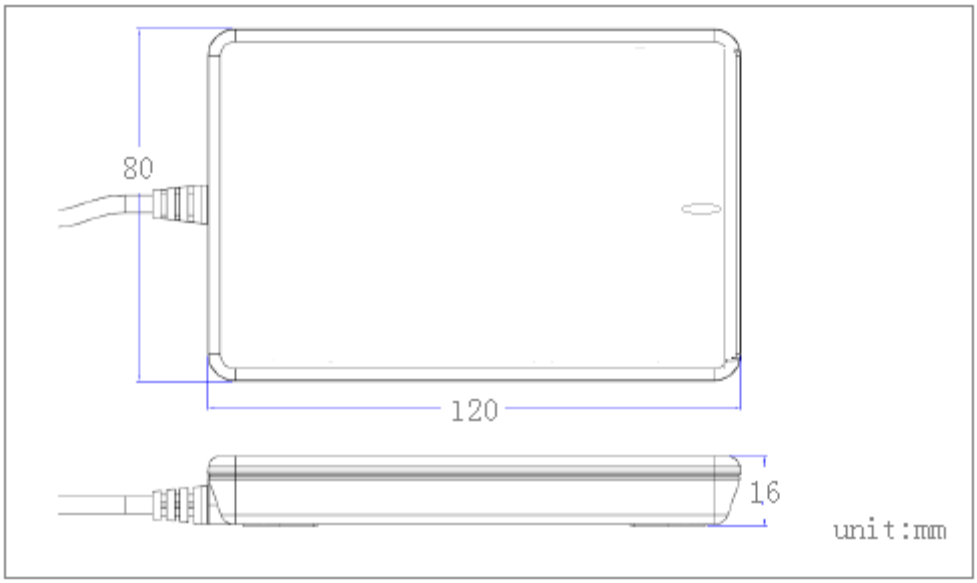
ER301 use USB port to act as a virtual COM port. The proximity operating distance of ER301 is up to 10 cm, depending on the type of contactless tag in use.

The ER301 is ideal for secure personal identity verification, access control, e-payment, e-ticketing for events and mass transit, toll road fare collection and network authentication.

2. Special Features

- Support ISO 14443A/Mifare_One(S50&S70) card
- RF Frequency: 13.56 MHz.
- Typical time of command：<35ms
- Operating distance: up to 10 cm
- Communications Interface: USB
- Two LED indicators (software controlled)
- Buzzer alarm (software controlled)
- Mechanic characteristics:
  - Size: 120 ×80× 16 (mm)
  - Cable length: 1.5m
  - Weight: 100g (include USB cable)

3. Technical Specifications



Dimensions	120 mm (L) x 80 mm (W) x 16 mm (H)
Weight	100 g (including USB cable)
Cable length	1.5m
Color	white
Interface	USB (VCP)
Baud rate	115200 bps (default)
Operating Distance	Up to 10 cm (depends on the tag type)
Supply Voltage	5V DC (USB power)
Supply Current	42mA (operating); 22mA (close port); 60mA (maximum)
Operating Temperature	-10~50 °C
Storage Temperature	-20~70 °C
Operating Frequency	13.56 MHz
RF Speed	212 kbps
Smart Card Supported	ISO 14443A/Mifare_one S50,S70
Operating System	Win NT, Win 2k, Win XP, Win Vista, Win 7, Win 8, Linux

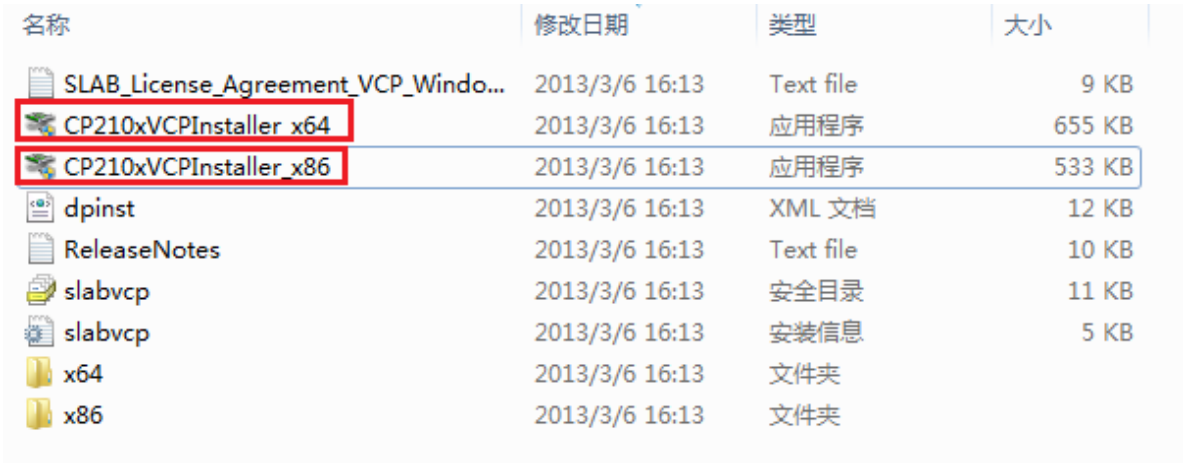
4. Typical Applications

- ✓ E-Payment
- ✓ E-Healthcare
- ✓ E-Game
- ✓ E-Government
- ✓ E-Ticketing
- ✓ Access Control

- ✓ Network Login
- ✓ Transportation
- ✓ Loyalty Program

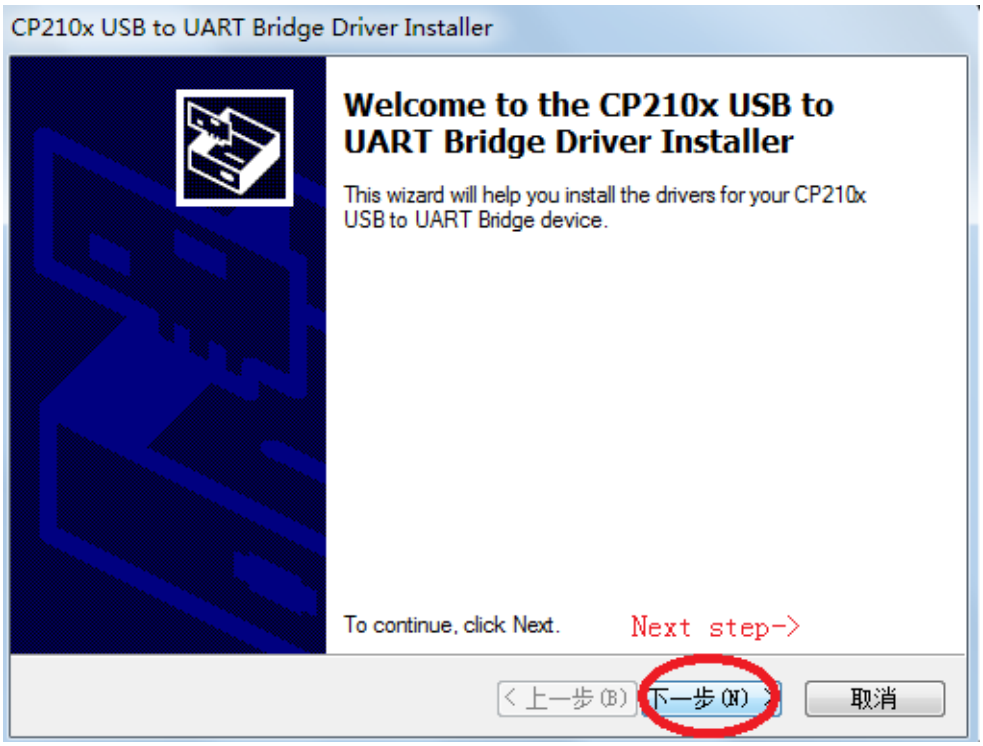
5. How to use

Step1: Open the folder "USB_Driver_Windows", then you will find two installer programs shown as below.

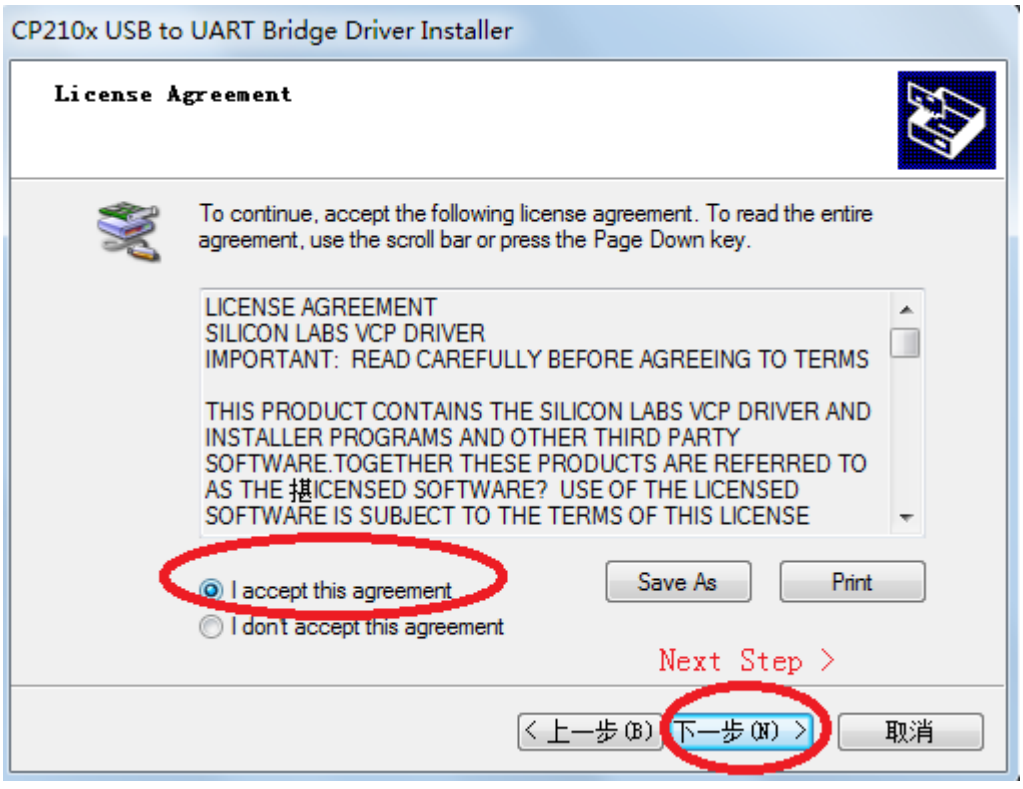


If the user's OS is windows 32 bits, then click "CP210xVCPInstaller_x86.exe" to install the driver, else if 64 bits, then click "CP210xVCPInstaller_x64.exe" to install the USB driver. (Note: if you have installed the driver before, then go to step2).

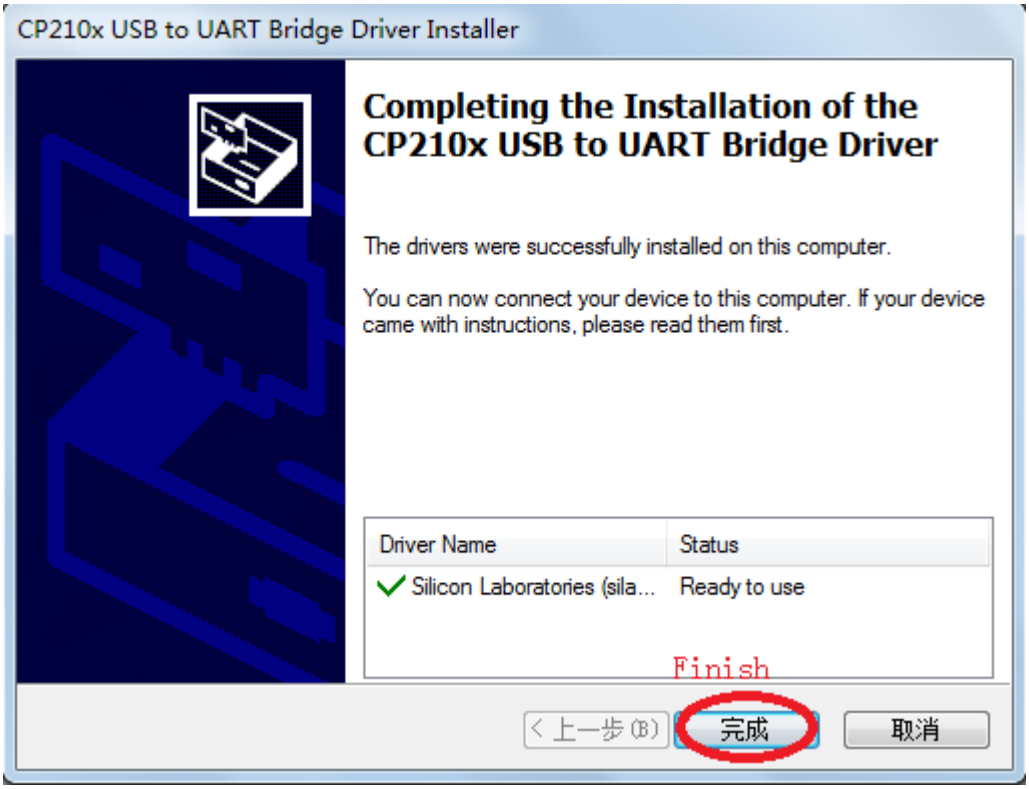
Step2: On the next picture, please click "next step".



Step3: On the next picture, select "I accept this agreement", next click "next step".



Step4: On the next picture, click “Finish”, then the USB driver install fully.

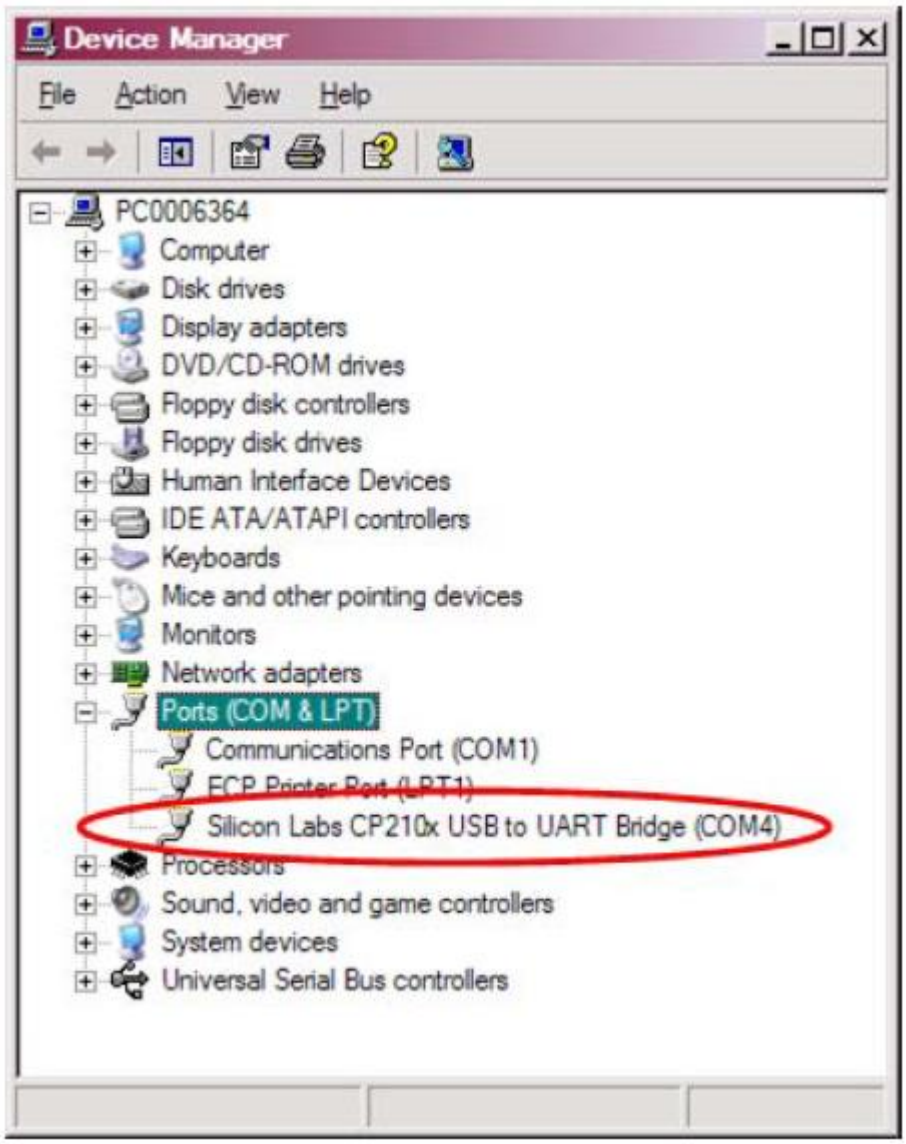


Step5: Connect the ER301 to the USB port of PC, shown as below.

After power on the RED led will flash one time, then the buzzer will beep one time, at last the blue led will light on, it means that the reader is ready now. You can

send the commands from the host to the ER301.

After connect the USB, you can see the Virtual Com Port (VCP) on the “Device Manager”.



Note: If the COMX exceed COM10, please change it between 1 to 10, for example, it show COM12, then you can change it into COM3.

Step6: Now, you can run the program to send commands to the ER301. You can run the eReader.exe or else App(base on the dll files) to communicate with the ER301. The ER301 will not do anything unless you send command to it. There is only one program can be run and connect to the ER301 at the same time.

Note: For the eReader program please see the eReader manual.

6. Troubleshooting

No.	fault	solution
1	No sound when power on	If the blue led is not light, plug the USB again or plug it into another USB port.
2	Blue led not light when power on	Same with above.
3	Beep all the time when power on	Reconnect the USB.
4	Can not read the card	Click “Device->Connect”, If connect ok, then the card maybe bad or is not a mifare card, or you maybe put the reader on the metal surface.
5	Can read card SN, but can not read or write the blocks	You have not the right authenticated keys.

Note: Remove the film which covers on the label shown as below on the first time using.